Bull (C. S.)

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CASES ILLUSTRATING TWO RARE DISEASES OF THE EYELIDS

SYPHILITIC GUMMATA OF THE CONJUNCTIVA

BY

CHARLES STEDMAN BULL, M.D.

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CASES ILLUSTRATING TWO RARE DISEASES OF THE EYELIDS.

By Charles Stedman Bull, M.D., New York.

I. TARSITIS SYPHILITICA—GUMMY INFILTRATION OF THE TARSUS.

Infiltration of the tarsus with a gummy deposit is a rare lesion in constitutional syphilis.* *Michel* describes it as a chronic indolent infiltration of the tarsus, which does not involve the external skin. The process of infiltration is, however, not always an indolent or passive one, if one may judge from an experience of a single case. *Magawly* has described four cases of this kind in the *St. Petersburger Med. Zeitschrift*, Bd. XII. heft 4, and his paper is referred to by both *Nagel* and *Michel*. In two of his cases the lower lid was involved in an apparently homogeneous, non-fluctuating tumor of the size of a small pigeon's egg, accompanied by some little œdema of the conjunctiva and swelling of the rest of the affected lid. In his other two cases the upper lid was involved and the tumor more circumscribed. In one of the latter cases, after the tumor had disappeared, it was found that the tarsus had entirely lost its normal resistance.

In 1873 *Vogel* wrote an inaugural treatise entitled, "Perichondritis of the Tarsal Cartilage," in which he reports a case of syphilitic infiltration of the tarsus, resembling *Magawly's* cases. The affection was characterized by a marked swelling and redness of the lids of the left eye. The swelling was not homogeneous, but varied in density in different places. The margin of the lid was movable over the swollen parts and intact, with the exception of a small spot of ulceration. *Vogel* regarded it as a chondritis or perichondritis of the cartilage of the lid. If we accept *Waldeyer's* view that the tarsus contains no cartilage cells, this cannot be regarded as a chondritis. After seven weeks of administration of potassium iodide the swelling of the lids entirely disappeared. In this case the primary lesion had occurred eight years before.

In the "Klinische Monatsblätter für Augenheilkunde" for January, 1878, *Fuchs* reports three cases of tarsitis syphilitica, met with in Arlt's clinic during the past four years. The first case was a man with a dense, smooth, painless swelling of both lids of one eye, which

* Graefe und Saemisch, Handbuch der Augenheilkunde, IV., 1, p. 441.

had lasted for four weeks. The period of infection was not known, but was probably recent, as there was still upon the glans penis a partially cicatrized ulcer, a papular syphilide upon the face and body, and enlarged cervical glands. The patient could not open the eye, but the lids were easily everted. The tarsus was very much thickened, but retained its normal shape in both lids. Conjunctiva not involved; entire loss of cilia on both lids; small ulcer at external commissure of lower lid. In about four weeks the patient was discharged cured. *Fuchs'* second case was a woman, æt. 34, who contracted a chancre four years before, followed by various constitutional symptoms, among others, left hemiplegia, from which she recovered in four months. Two years later the left upper lid began to swell, and the infiltration became so dense that the eye could not be opened. Six months later this ulcerated, remained open for four months, and then healed, the lid gradually regaining its normal state. Six months before *Fuchs* saw her the same thing developed in the right upper lid. The whole tarsus was very much thickened, but retained its general shape, and here also the cilia were wanting. The same treatment by mercurial inunction and potassium iodide gave the best results, though requiring a somewhat longer time than in the first case.

Fuchs' third case was a man, aged twenty-eight—initial lesion six years before. In this case the process was a rapid, active infiltration accompanied by great pain. It was in the right upper lid and had lasted eight days. It grew so rapidly and the pain became so severe that an incision was made in the tarsus, which showed a brawny yellow surface, and there was no hemorrhage. By constant use of mercurial inunction, potass. iod., and the local application of tincture of iodine for three weeks, the swelling of the lid began to diminish, and at the end of two and a half months the patient was discharged much relieved, though the tarsus was still hypertrophied, but soft and yielding, and the pain had entirely disappeared. The final result reached in this case is not known.

The following case was under the writer's care during the past year, and its rarity will perhaps excuse a detailed account.

The patient was a young man, aged twenty-seven, a bartender, who applied for treatment in November, 1877. He had contracted syphilis about four years before, the initial lesion having been on the glans penis near the mouth of the urethra. The chancre did not heal for nearly six weeks, and in the meantime he had enlargement of the inguinal glands and a general eruption all over his body and face. The next manifestation of constitutional trouble was a series of

mucous patches in the mouth and on the tongue, and a painful ulceration on the right side of the fauces. During the second year there appeared another eruption, which was papular, and his hair began to fall out. He had never had any systematic or long-continued treatment. His eyes had been always perfectly sound until six weeks before I saw him, when he noticed that the lower lid of the left eye felt heavy and large; and on looking in the glass the lid was seen to be slightly swollen, the skin a little reddened, and the conjunctival surface felt rough. There was no pain and no secretion of any sort, and vision was undisturbed. These symptoms continued to slowly increase, without any pain or discharge, until he presented himself for treatment. When I saw him the lower lid of the left eye was very much swollen, making a tumor as large as a robin's egg, the skin very much reddened over it, and the swollen lid pressed closely against the eyeball. The tumor was hard, resisting, solid to the touch, and absolutely painless. The lid could not be everted, but by pulling it away from the eye the conjunctiva was seen reddened, but not markedly so. The tumor seemed to be homogeneous throughout, and for some time past had caused constant epiphora from compression of the punctum and canaliculus. There was a pustular eruption on the face and neck, and a few spots on the dorsum of the hands. Convinced of the syphilitic nature of the palpebral lesion, I placed the patient immediately upon the mixed treatment, using half an ounce daily of mercurial ointment upon the soles of the feet, and commencing with potass. iodid., grs. xv., three times a day, and rapidly increasing the dose. After about ten days of this treatment the swelling of the lid began to soften, and the inunction was used on alternate days. At the end of the third week the swelling had diminished considerably, and the mercury was discontinued, the potass. iodid. being given in grs. xxx. doses. At the end of the sixth week the tumor had entirely disappeared, the lid resumed its normal consistency and motility, and the cutaneous eruption was rapidly fading out; and at the end of the eighth week the patient was discharged cured.

This seems to have been a gummy infiltration of the entire substance of the lid. As the tumor disappeared and the patient recovered, we have not the advantage of a microscopical examination of the lesion, but the infiltration, in all probability, started in the tarsus, and spread thence to the other tissues of the lid. The conjunctiva did not seem to be involved. After the extreme density of the swelling had given way, the seat of the hypertrophy was easily lo-

cated in the tarsus, which retained more or less perfectly its shape. In this case there was a complete absence of the cilia on the lid, due probably to compression of the hair-follicles by the gummy infiltration of the surrounding tissue. After the swelling had diminished sufficiently to admit of eversion of the lid, in various places through the conjunctiva could be seen a brawny, yellowish-white appearance of the infiltration, which slowly disappeared as the absorptive process went on. The cure is probably not a complete one, for with so much and dense an infiltration there must result more or less deformity of the tarsus, either from absorption by compression, or from softening of its tissue. In all the cases reported, this making the ninth, the course seems to be a very chronic one, though a cure is no doubt hastened by an energetic antisyphilitic treatment.

II.—Amyloid Infiltration of the Lid and Orbit.

Antonio D., æt. 4½, born in New York of Spanish parents. Child has never been robust, and is of marked strumous diathesis. Has had frequent attacks of phlyctenular keratitis, and bears numerous cicatrices in the neck of former glandular suppuration. Has a pale, waxy complexion, feeble pulse, and is of stolid demeanor. First seen by the writer on January 24, 1876. About three weeks before, the child woke up one morning with a slight redness and swelling of the outer part of the left upper lid, near the orbital margin. There was no pain and no secretion from the conjunctival surface. These symptoms steadily increased until he was brought for treatment. At this date the left eye was almost completely closed by the overhanging swollen lid, and the child had lost all power over it. The skin was moderately reddened, but there were no superficial vessels visible either on the lid or vicinity of the face. The swelling was a tense, hard, uniform thickening of all the tissues of the lid apparently, being most marked near the outer canthus. The eyeball was markedly limited in its motility upward and outward, but moved freely in other directions. The media were clear, and there was nothing abnormal to be seen in the fundus. The lid could not be everted, and the sulcus between the lid and the superior margin of the orbit was filled up by the inflammatory process, so that the finger could not be pressed in between the roof of the orbit and the eye. There was no tenderness on pressure along the orbital margin, and the child never complained of any pain. It seemed probable that this was a low

grade of cellulitis of the lid and its attachments, and possibly also of the tissues of the orbit. The infiltration was limited on the temporal and nasal sides by the external and internal canthal ligaments, but spread back into the orbit. The symptoms slowly progressed to February 16th, when there was a decided increase in prominence of the upper lid, the eyeball was pushed more downward and inward, and at the same time there began to be some exophthalmus. All motion of the eye upward was lost. The palpebral and ocular conjunctiva was very much injected, and there was some muco-purulent secretion. Vision was still normal, and there was no change visible in the fundus. For the last two nights the child had complained of pain in the orbit and forehead. Two days later the preauricular gland was noticed to be indurated and swollen, and the general condition of the child was unsatisfactory. Up to this time a simple tonic, restorative, and expectant plan of treatment had been followed out, and in addition, potass. iodid. was now administered. On March 1st the symptoms were all very much increased—the exophthalmus more marked, very little motion of the eye; there was an ulcer of the cornea just above the centre, with a rather wide zone of opaque infiltration around it—the preauricular gland was larger, and the swelling was more pronounced along the superior orbital margin, and encroached upon the forehead. For the last few days there was a deep-seated pain in the orbit, and great febrile action all through the night. It was decided to make an exploratory incision into the orbit, in hopes of finding an abscess and giving exit to the pus, the opinion still being held that it was an orbital cellulitis. After much demur the parents consented, and on March 3d the patient was etherized, and an incision, 1¼ inch long, was made along the orbital margin from the supraorbital groove outward, and about half an inch deep. This cut was made through a very dense, unyielding tissue, and did not open into the orbital cavity, so dense was the infiltration. The incision was then deepened until the bony edge of the orbital roof could be felt, and then a straight, sharp bistoury was thrust backward for about an inch, keeping the blade well away from the eyeball. Not a drop of pus was met with, and the tissues of the orbit were found densely infiltrated and converted into a brawny mass. The hemorrhage scarcely amounted to a few drops, and came almost entirely from the vessels of the skin. A small, irregularly quadrilateral piece of brawny tissue was removed from the orbit through the incision, and when washed, was of a dirty yellow color, absolutely bloodless, and very dense, like the thick rind of bacon.

The immediate result of the incision was a slight diminution of the orbital tension, so that the pain was less complained of, and the eye seemed a little more movable, but this effect was merely temporary. The pain returned, and the exophthalmus seemed to increase again after the closure of the wound, which occurred on the sixth day. On March 13th, the whole cornea became hazy, the infiltration spreading from the central ulcer. The latter had not perforated, but the pupil had become contracted and could not be dilated. On the 12th a purulent discharge began in the left ear, accompanied by severe pain in the ear and left side of the neck. The child cried almost constantly with pain in the eye and ear, had a high fever, pulse 140, and the mother said that he neither ate nor slept. On March 15th the cornea sloughed at the centre, and the iris and lens prolapsed in the opening. It was deemed advisable to enucleate the contents of the orbit at once, but this the parents refused to have done, and they withdrew the child from observation.

It was afterwards learned that the child lived several weeks longer, became very much emaciated, and died comatose. No autopsy was allowed.

The infiltrated tissue removed from the orbit through the long exploratory incision gave the usual reaction with iodine and sulphuric acid, turning brownish-red in spots on the addition of a watery solution of iodine, and changing into a dark blue, almost purple, when sulphuric acid was used.

The microscopical examination of the specimen was not entirely satisfactory, owing to the small amount of tissue at hand. After hardening in Müller's fluid and alcohol, sections were made, which showed in some isolated spots a luxuriant granulation tissue. There were very few vessels, and in those which existed the walls were very much hypertrophied, mainly at the expense of the calibre of the vessel, which in some could scarcely be distinguished. The infiltration seemed to involve not only the coats of the vessels, but to extend for a greater or less distance into the surrounding connective tissue. This condition of the orbital tissue plainly accounted for the small amount of hemorrhage. The infiltration had involved the walls of the blood-vessels, had narrowed their calibre, and eventually obliterated the vessels altogether. There was very little trace of either connective or adipose tissue, but the main mass seemed to be a homogeneous, structureless infiltration. From a clinical standpoint the morbid processes, without doubt, began in the orbital tissue, and

probably not far from the tarsal fascia and palpebral ligaments. The infiltration spread forward into the lid and up on the forehead as well as backward into the orbit, and the latter direction was not taken until after the disease had lasted for some time, for the exophthalmus was a comparatively late symptom. It would have been extremely interesting to have been able to follow the extension of the infiltration into the tissues of the lid, and note to what degree they were involved. The lid, towards the last, felt more like a piece of sole-leather than anything, so dense, unyielding, and homogeneous did it seem to be. Whether the perforation of the membrana tympani with the purulent otitis media had any connection with the orbital process, it is impossible to say, but it is probable that there was some such connection. The death of the child by coma preceded by other brain symptoms, points almost conclusively to an extension of the orbital process backward into the cavity of the skull, and in this way the ear may have become secondarily involved. It is very unfortunate that the history of the case could not be completed by a careful autopsy.

SYPHILITIC GUMMATA OF THE CONJUNCTIVA. By Charles Stedman Bull, M.D., New York.

Gummy infiltration of the conjunctiva, whether circumscribed or diffuse, is probably the least common of all syphilitic lesions of that membrane. Gumma of the sclera, involving sometimes the fibrous capsule of the eyeball, is not an uncommon late symptom of syphilis; but gumma of the conjunctiva is certainly rare. Late manifestations of syphilis occurring in this neighborhood are rarely limited to the conjunctiva, but, beginning almost always in other tissues of the eyelids or eyeball, involve the mucous membrane by contiguity of structure. The following case of gummy infiltration of the conjunctiva with gummata of the sclera was under the author's care. The combination of constitutional syphilis with a certain group of symptoms that somewhat resembled scurvy, the general marasmus which existed, and, finally, the death from pneumonia, make up an interesting case.

Louis Budlow, æt. 56, native of Canada, and by occupation a laborer, was admitted to Charity Hospital, Blackwell's Island, August 11, 1877. The patient is a tall, robust man, but prematurely aged in appearance. Always healthy until the autumn of 1876, when he caught a severe cold, and was admitted to the hospital for simple bronchitis. At the end of ten days he was discharged cured, not having been confined to his bed for a single day. Remained well until the following summer, when he contracted a cough, and was readmitted to the hospital on August 11th. He had a dry cough, pain in the chest on both sides running through to the back, an elevated temperature and accelerated pulse, with all the physical signs denoting pleurisy, with slight effusion on both sides.

Fifteen years ago he had suffered from gonorrhœa, but positively denied ever having had the initial lesion of syphilis. Admitted to the ophthalmic ward of the hospital August 16, 1877. Two or three days before, he had felt a sensation of soreness in the left eye, and on the following day in the right eye. The pain became dull, burning, and continuous, and was located in the eyeballs. Whenever he swal-

lowed, whether solids or liquids, he felt a severe pain in the eyes, and this was immediately followed by marked blepharospasm.

Nothing particular about the man's general appearance, except a dull yellow complexion and a look of hopeless wretchedness. An examination of the abdomen and back showed the marks of an extensive old eruption, consisting of small white cicatrices, with deep brown pigmented margins, which have existed for twenty years. Upon the hands and face there was a peculiar eruption, composed of elevated spots with flat tops, some round, others oval, yellowish red in color, with a narrow dark red areola. They were neither painful nor tender to the touch, and presented a mid state between vesiculation and pustulation. On opening these a thin, watery pus mixed with blood could be pressed out. These vesicles or pustules were scarcely large enough to be called bullæ, and yet there was conveyed to the mind a general idea of pemphigus. One of the largest pustules was on the left upper lid, and there were two smaller ones along the ciliary margin. There were several on the face, and the remains of a large one on the bridge and right side of the nose. On the hands the eruption was almost entirely on the dorsal surface, and was grouped around the knuckles and between the fingers. Some vesicles on being opened gave exit only to blood.

The eyes were almost identical in appearance. Surrounding the corneæ there was a growth, most marked on the outer and lower sides, varying in height from one and a half to two lines, seated in and beneath the ocular conjunctiva. This growth extended away from the cornea on all sides about one-third of an inch, was pale yellow in color, moderately hard to the touch, with an irregular, knobby surface, and apparently destitute of vessels. The conjunctiva was firmly adherent to this growth, and the cornea was embedded in this wall like a watch-crystal in its frame. On being incised it cut like brawn, and the hemorrhage was very slight. Upon the sclera of each eye, between the tendons of the superior rectus and external rectus muscles, and partially covering the latter, was an extensive and extremely well-marked gummy infiltration of the sclera, very vascular, very tender to the touch, and especially painful when the eyes were turned outward. This infiltration extended backward symmetrically in the two eyes, but was somewhat more extensive in the right eye. The media were clear, and an ophthalmoscopic examination revealed nothing abnormal. The patient's breath was fetid, the buccal mucous membrane very pale, and bore the marks of the teeth along the cheek. Tongue moist and thinly coated; appe-

tite poor; bowels obstinately constipated. Temperature 100¼; pulse 102; intellect dull, answered questions very slowly. Physical signs of pneumonia well marked over both lungs. A diagnosis was made of syphilitic pemphigus, gummy tumor of the sclera, and pericorneal gummy infiltration of the conjunctiva, and double pleuropneumonia. The patient's condition was very bad, and a vigorous tonic and restorative treatment, combined with mercurial inunction and potass. iodid., was at once instituted. Quinine, dilute sulphuric acid and iron were regularly administered, potass. iodid. grs. xx. ter die, and the inunction night and morning, and a liberal diet of milk, eggs, beef-tea, and eight ounces of whiskey daily.

August 25th.—The patient grew slowly worse, with occasional delirium, and in the intervals of the delirium the stupor slowly deepening. The dose of potass. iodid. increased to grs. xxx. Diminution of conjunctival infiltration!

August 26th.—Integument dusky, breath very fetid, gums spongy and bleeding. Urine is turbid, sp. gr. 1015, contains a trace of albumen, some pus-corpuscles, and a large number of triple phosphate crystals. Spots on the hands are growing larger and approaching bullæ in appearance. Skin very dry and hot. A swelling has made its appearance over the inner condyle of the right arm, painful on pressure. This swelling soon extended down the right forearm, pitted on pressure, and was doughy to the touch. The right hand, both legs and feet, œdematous.

August 27th.—Painful diarrhœa, attended by tenesmus, rumbling and bloody discharges. Face puffy; repeated bleeding from the gums and nose. Patient is semi-comatose. Consolidation now detected at apices of both lungs, with some friction sounds on left side. *The scleral growths and the pericorneal conjunctival infiltration have almost entirely disappeared.* The spots on the hands and face are increasing in size and becoming more red in color.

August 29th.—Diarrhœa ceased; mercury discontinued. Transferred to pavilion on account of delirium. Right cheek swollen, especially near angle of mouth, and a spot of ulceration on buccal surface, opposite the first molar tooth in the upper jaw. Right forearm red, hot, and tense.

August 31st.—Right cheek swollen enormously, eruption decidedly hemorrhagic.

September 3d.—Incisions in right forearm necessary to relieve tension—considerable pus discharged through the incision, and patient much relieved. Swelling of right cheek still more marked, and at

one point on mucous surface a somewhat extensive black slough. *Eyes entirely well.*

September 6th.—Constant delirium; slough in cheek extending; eruption drying up. Arm doing very well, scarcely any febrile action.

September 16th.—Large hole sloughed through the entire thickness of the cheek. Delirium has turned to coma. Steady improvement in the arm.

September 19th.—Death at 4 P.M. in deep coma.

Autopsy, twenty and a half hours after death. Body emaciated. On back of hands a number of bluish red spots, varying in size from a three-cent piece to a dime. Beneath the right malar bone is a round, clean-cut ulceration of all the tissues of the cheek, which extends to the angle of the mouth, but does not involve it. All the tissues involved in the ulceration form a soft, pulpy, brownish red, offensive mass. Right half of the tongue destroyed by ulceration. Right half of inferior maxilla, from symphysis to angle, is denuded of periosteum and bare, and the same condition exists in the right superior maxilla.

Calvarium unusually thin. Dura mater normal. Increased amount of cerebro-spinal fluid. Pia mater œdematous, sinuses empty, vessels at base of brain normal. At posterior portion of right hemisphere is a spot of softening about an inch in diameter, breaking down immediately on section.

The *thoracic cavity* contained about ten ounces of clear serous effusion—on the right side a few bands of adhesion at the apex—on the left side a few bands of adhesion at the base to diaphragm. Upper lobe, central portion of middle lobe, and greater portion of lower lobe of right lung in stage of gray hepatization, associated with emphysema. In left lung, entire lower lobe the seat of catarrhal pneumonia passing into the gray stage—upper lobe emphysematous and œdematous.

Heart.—Both ventricles hypertrophied and dilated; on leaflets of aortic valves some soft vegetations; in pericardial cavity about half an ounce of clear serous effusion.

Abdomen.—Liver fatty; capsule of spleen thickened, and its parenchyma almost diffluent. In cortex of kidneys several small abscesses, size of a split pea; in both pyramidal and cortical portions are evidences of chronic interstitial nephritis. Pelves and ureters contain a small amount of pus.

Intestines normal, except a few chronic ulcerations in the cæcum.

Situated in the median line of the neck, below and between the

lateral lobes of the thyroid gland, is a tumor as large as an English walnut, just beneath the subcutaneous fascia. It is soft and fluctuating, and found filled with disintegrated coagulæ. On the internal surface of its walls were a few calcareous plates. Pharynx and trachea normal.

The points of interest in the case are:

1. The rarity of the pericorneal and conjunctival growth.

2. Its coincidence with, and yet independence of the gummy infiltration of the sclera.

3. The cyst in the neck, with its disintegrated contents, unrecognized before death.

4. The vesiculo pustular eruption, becoming pemphigoid and subsequently hemorrhagic.

5. The hemorrhagic diathesis as shown in the various symptoms.

Of course, gummy infiltration of the sclera and episcleral tissue is a common enough manifestation of constitutional syphilis, and the scleral gummata in this case occupied the usual site in the neighborhood of the external rectus muscle. Though the infiltration was extensive, this is not uncommon, and it spread in the usual direction from before backward, toward and beyond the equator of the eyeball. Furthermore, it was binocular and symmetrical, as is usually the case in syphilitic lesions of the eye. As regards the conjunctival gummata in this case, no ulceration occurred. Their appearance at first, and their mode of growth, resembled very much the description given by *Suce* of his case. They began as a dirty discoloration in small patches in the conjunctiva around the cornea, with at first scarcely any elevation. These patches then coalesced, gained in thickness and breadth, and thus formed the wall around the cornea. They then remained unchanged until the system came under the influence of the mercury, and then, in spite of the patient's generally deprived physical condition, they rapidly subsided and disappeared before the scleral infiltration was absorbed. The conjunctiva and sclera were normal in appearance between this circum-corneal wall and the gummy tumor of the sclera, near the external rectus muscle. There was no increased vascularity of the eyeball, except in the immediate neighborhood of the latter. The symmetrical arrangement of the double infiltration in the two eyes, and what might be called their symmetrical independence, was of considerable interest.

A third point of interest was the cyst in front of the trachea, the existence of which had not been recognized before death. This cyst

had no connection with the thyroid body or trachea, and had probably existed for some time, perhaps years, if we may judge from the presence of the calcareous plates upon the inner surface of its walls. The exact pathology of the cyst it is very difficult to determine. There were no signs of interference in the function of either trachea or œsophagus during life, so that its rate of growth is unknown. In view of the constitutional syphilis, its origin had been probably a gummy deposit in the subcutaneous tissue of the neck, just below the isthmus of the thyroid and in front of the trachea, which had subsequently undergone retrograde metamorphosis. Its contents found at the autopsy were regarded as disintegrated clots, but the presence of the blood may be accounted for by the marked hemorrhagic diathesis. The wall of the cyst varied in thickness from three to five lines, its inner surface was smooth, as if covered by a membrane, except where the calcareous plates were situated, and the outer surface rough, owing to adhesions to the surrounding tissues. Microscopic sections showed that there was no distinct lining membrane, nor any trace of epithelium, and the smooth appearance of the inner surface was probably the result of pressure of the contents. The wall was composed of a large number of layers of fibro-areolar tissue, with some cells, fusiform and round, with nucleus and granular contents. These layers of fibres were packed very closely together, forming a dense, strong wall, which had probably originated in the following way. A gummy deposit had occurred in the subcutaneous areolar tissue, which by its presence had set up a localized inflammation, lymph was poured out around the gumma, became organized, and thus the growth went on. At some subsequent period the contents of the tumor began to break down, disintegrated and perhaps suppurated, and at this stage the hemorrhage may have occurred and mingled with the contents. As the process of absorption went on, these bloody extravasations probably recurred again and again, and thus the cyst-wall had no opportunity of collapsing, and hence no obliteration of the cavity occurred.

The accompanying eruption was another interesting feature in the case. Its ill-defined, nondescript character was at first unsatisfactory. The spots were as often pustules as vesicles; and even when more truly vesicular, the surrounding areola was different from that usually seen in this variety of eruption. Only in a few of the spots was the areola at all well marked, and the vesicles were not large enough to speak of them as bullæ until towards the close of life. The ill-defined character of the eruption was no doubt the sign of de-

fective development, due to the extremely low, marasmic state of the man's system. As a rule, patients with pemphigus die of marasmus, and very often from pulmonary tubercles or pneumonia. In many cases we also find at the autopsy amyloid degeneration of the liver, spleen, and kidneys, with chronic interstitial desquamative nephritis. The locality of the eruption was also somewhat singular. According to authorities, the favorite place for pemphigus is on the palm of the hand and sole of the foot, on the scalp and brow. But in this case the eruption was on the face below the forehead, and on the dorsum of the hands and fingers. The scars on the back and abdomen might point to a papular or tubercular eruption. As a rule, scars do not give any absolutely characteristic sign by which to recognize the preceding destructive process, though we are sometimes assisted by them in coming to a conclusion as to the nature of the lesion.

The final point of interest was the hemorrhagic diathesis, as shown by the tendency to bleed from mucous and cutaneous surfaces on slight provocation, and towards the end spontaneously. The buccal mucous membrane and tongue were almost bloodless, and the patient had frequently had epistaxis. Subsequently his gums became spongy and bled easily. A bloody diarrhœa made its appearance and was with difficulty controlled, recurring again and again towards the end. The eruption became hemorrhagic, and even at first the contents of the vesicles or pustules was in part blood. As the vesicles became bullæ, the hemorrhagic tendency was still more clearly developed.